

REMARKS

Claims 1-20 are currently pending in the application. By this amendment, claims 1, 3-5, and 7 are amended and claims 8-20 are added for the Examiner's consideration. The above amendments do not add new matter to the application and are fully supported by the original disclosure. For example, support for the amendments is provided in the claims as originally filed, at Figures 1-3, 10-13, 15, and 16, and at pages 5-7, 11-12, 20-21, and 51-52 of the specification. Reconsideration of the rejected claims in view of the above amendments and the following remarks is respectfully requested.

Objection to Abstract

The abstract of the disclosure has been objected to for being too long. By this response, a replacement abstract is provided.

Accordingly, Applicants respectfully request that the objection to the abstract be withdrawn.

35 U.S.C. §112 Rejection

Claims 1 – 7 were rejected under 35 U.S.C. §112, 2nd paragraph. This rejection is respectfully traversed.

The Examiner asserts that the claims appear to be a literal translation and should be reviewed for clarity and form. The Examiner further asserts that the recitation "on the conditions of a light section formed on the image forming surface or conditions of

the speckle pattern" renders claim 1 indefinite, and that the recitation "or at least one of them" renders claim 7 indefinite.

Applicants respectfully disagree that the above-noted recitations render the claims indefinite, and submit that the claims are clear and definite when read in light of the specification. Nevertheless, in order to advance prosecution, claims 1 and 7 have been amended to clarify the claimed invention.

Accordingly, Applicants respectfully request that the rejection over claims 1 – 7 be withdrawn.

35 U.S.C. §101 Rejection

Claims 1 – 6 were rejected under 35 U.S.C. §101 for apparently being directed to non-statutory subject matter. This rejection is respectfully traversed.

While Applicants respectfully disagree that claims 1-6 are unpatentable under 35 U.S.C. §101, nevertheless, in order to advance prosecution, claim 1 has been amended to recite, *inter alia*:

A method ... comprising measuring a gel state or a change in sol-gel state of said material body using a light section formed on an image forming surface or conditions of a speckle pattern.

Applicants submit that the claimed invention, as amended, is directed to statutory subject matter because it accomplishes a practical application (*i.e.*, produces a useful, concrete, and tangible result).

Accordingly, Applicants respectfully request that the rejection over claims 1 – 6 be withdrawn.

35 U.S.C. §102 Rejection

Claim 7 was rejected under 35 U.S.C. §102(b) for being anticipated by U. S. Patent No. 4,641,527 issued to Hiroi *et al.* ("Hiroi"). This rejection is respectfully traversed.

The present invention relates to a method and a device for the non-destructive, non-contact and quick evaluation of changes in the gel state and sol-gel state of a material body capable of causing changes in the gel state and sol-gel state of a gel material body, using a two dimensional image-analyzing technique and making use of an image formation or speckle pattern of a coherent irradiation light section as the index. Independent claim 7 has been amended to recite, *inter alia*,

a light irradiation device which irradiates a light having at least one spot shape or line shape section in a first direction onto a material body;

a light irradiation photographing device comprising at least one of two-dimensional image recognizing means;

a moving device for moving at least one of (i) the light irradiating device and the two dimensional image recognizing means and (ii) the material body in a direction transverse to the first direction, for carrying out scanning measurement of almost full face or full face of the material body which can be observed in a photographing direction of the two-dimensional image recognizing means.

Applicants submit that Hiroi does not disclose these features. Instead, Hiroi discloses an inspection method and apparatus for joint junction states directed to

inspect whether soldering is achieved steadily at soldered portions where electrical parts of a large scale integrated (LSI) circuit are soldered to a circuit board. An object to be inspected is indirectly vibrated by contactless means, a laser beam is irradiated on the vibrating object, a laser beam reflected from the vibrating object and passed through an optical system is observed or detected by a linear sensor, and a laser speckle pattern on the object to be inspected is observed to judge the quality of a junction state of the object. However, Hiroi does not disclose a light irradiation device which irradiates a light having at least one spot shape or line shape section in a first direction and a moving device for moving at least one of the light irradiating device and the two dimensional image recognizing means and the material body in a direction transverse to the first direction. Therefore, the applied art fails to disclose each and every feature of the claimed invention.

Accordingly, Applicants respectfully request that the rejection over claim 7 be withdrawn.

Other Matters

The specification has been amended to correct typographical errors that have come to Applicants' attention.

Claims 3-5 have been amended to include language consistent with that of amended independent claim 1.

New Claims

New claims 8-20 are added by this amendment and are believed to be patentably distinct from the applied art and in condition for allowance. For example, new claim 8 depends from allowable claim 7, and should be allowable at least for the reasons described above. New independent claim 9 recites features that are not shown by the applied art, including, *inter alia*, an image recognizing device structured and arranged to measure the gel state or change in sol-gel state of the material by receiving a speckle pattern of the coherent light from the material. New claims 10-20 depend from allowable independent claim 9.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 19-0089.

Respectfully submitted,
Touichirou TAKAI

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', is written over a horizontal line.

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